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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/713,743

11/13/2003

Michael A. Halcrow

2300.000200

2691

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7590

09/14/2007

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EXAMINER

PERUNGAVOOR, VENKATANARAY

ART UNIT

PAPER NUMBER

2132

MAIL DATE

DELIVERY MODE

09/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/713,743

Applicant(s)

HALCROW ET AL.

Examiner

Venkat Perungavoor

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. The Applicant's arguments filed on 8/21/2007 are not persuasive. As Song discloses the searching of encrypted terms against an list of encrypted terms see § Searching with an Encrypted Index Par. 4. And further, Song illustrates that searching of a word W that is encrypted and compared against a encrypted document see § Searching on Encrypted Data Par. 4.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Publication 2002/0174355 A1 to Rajasekaran et al.(hereinafter Rajasekaran) in view of Practical techniques for searches on encrypted data by Song et al.(hereinafter Song).
4. Regarding Claim 1, 8, Rajasekaran discloses the accessing one or more terms associated with one or more nodes of a network see Fig. 9 item 904a – 904d & Fig. 2 item 202; encrypting the accessed term Fig. 2 item 206; providing of result of comparison see Fig.2 item 218 & Fig. 3 item 320. But does not explicitly disclose the receiving of encrypted search term from a user, comparing the encrypted search term with a portion of accessed term. However, Song discloses the receiving of encrypted search term from user see Page 1 (Introduction, First Bullet- "...The techniques of hidden queries...") and the comparing of encrypted

search term with portion of accessed term see ( 5.4 Searching with an Encrypted Index Par.

4- "...Consequently, when Bob searches ....from the index." It would be obvious to one having ordinary skill in the art at the time of the invention to include the receiving of encrypted search term from a user, comparing the encrypted search term with a portion of accessed term of Song in the invention of Rajasekaran in order to have an controlled searching on an un-trusted server as taught in Song see (4.2 Scheme II: Controlled Searching).

5. Regarding Claim 2, 9, 16, Rajasekaran does not disclose the encrypting the search term and access term using same algorithm. However, Song discloses the encrypting using the same algorithm see (4.3 Scheme III: Support for Hidden Searches Index). It would be obvious to one having ordinary skill in the art at the time of the invention to include the encrypting using the same algorithm of Song in the invention of Rajasekaran in order to have make standardized encryption possible as taught in Song see (4.2 Scheme II: Controlled Searching Par. 5).
6. Regarding Claim 3, 10, 17, Rajasekaran discloses the hashing as form of encryption see Fig. 6
7. Regarding Claim 4, 12, 14, 18, Rajasekaran discloses the internet and other readable formats being used see Par. 0006 & Par. 0026.
8. Regarding Claim 5, 11,19, Rajasekaran discloses the terms being stored in a database see Fig. 10 item 1010.

9. Regarding Claim 6, Rajasekaran does not disclose proximity operation. However, Song discloses the proximity operation see 5.2 Supporting More Advanced Search Queries Par. 2 “...W near W’...”. & Par. 3. It would be obvious to one having ordinary skill in the art at the time of the invention to include the proximity operation of Song in the invention of Rajasekaran in order to more advanced and adaptable Song see (5.2 Supporting More Advanced Search Queries Par. 4 “For many... revelant”).
10. Regarding Claim 7, 13, Rajasekaran discloses the storage system having two memory subsystem see Fig. 1 item 106.
11. Regarding Claim 15, Rajasekaran discloses the storage system see Fig. 10 item 1010, an control unit see Fig. 10 item 1006 that access one or more terms associated with one or more nodes of a network see Fig. 9 item 904a – 904d & Fig. 2 item 202; store the accessed term see Fig. 10 item 1004 “Collection of files info”; encrypting the accessed term Fig. 2 item 206; providing of result of comparison see Fig.2 item 218 & Fig. 3 item 320. But does not explicitly disclose the receiving of encrypted search term from a user, comparing the encrypted search term with a portion of accessed term. However, Song discloses the receiving of encrypted search term from user see Page 1 (Introduction, First Bullet- “...The techniques of hidden queries...”) and the comparing of encrypted search term with portion of accessed term see ( 5.4 Searching with an Encrypted Index Par. 4- “...Consequently, when Bob searches ....from the index.” It would be obvious to one having ordinary skill in the art at the time of the invention to include the receiving of encrypted search term from a user,

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comparing the encrypted search term with a portion of accessed term of Song in the invention of Rajasekaran in order to have an controlled searching on an un-trusted server as taught in Song see (4.2 Scheme II: Controlled Searching).

12. Regarding Claim 20, See part of Claim 6 for proximity operation and see Claim 7 for disclosure of two databases.

***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Venkat Perungavoor whose telephone number is 571-272-7213. The examiner can normally be reached on 8:30-5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VP/  
Venkat Perungavoor  
Examiner  
Art Unit 2132  
September 4, 2007

  
GILBERTO BARRON JR.  
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